

**MASTER OF BUSINESS ADMINISTRATION  
(MBACT)**

**Term-End Examination**

**December, 2013**

**MCTE-022 : VOICE OVER INTERNET  
PROTOCOL**

*Time : 3 hours*

*Maximum Marks : 100*

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*Note : Answer any five questions. Each question carries  
20 marks.*

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1. (a) Write and explain various steps Involved in originating a VOIP telephone call. **10**
- (b) Write merits and limitation of VOIP over PSTN. **10**
  
2. (a) What is Real-time Transport Protocol (RTP) ? Write and explain various components of it ? **10**
- (b) Explain, how RTP defines a standardized packet format for delivering audio over IP networks ? **10**
  
3. Explain, how the following challenges can be achieved in VOIP ? **20**
  - (a) Layer-2 quality of service
  - (b) Number portability
  - (c) PSTN Integration
  - (d) Caller ID

4. (a) Write and explain various Voice over IP (VOIP) signalling threats and attacks. 10  
(b) Explain in brief on the following VOIP security devices 10  
(i) Application-Layer Gateway  
(ii) Session boarder controller
5. (a) Write and explain various Critical legal Issues that are to be addressed in adoption of VOIP in India and Abroad 15  
(b) Write short notes on Skype protocol 5
6. Explain in detail on the following :  
(a) Media Gateway Control protocol (MGCP) 10  
(b) Session Initiation protocol (SIP) 10
7. Write short notes on the following : 5x4=20  
(a) Session Description protocol  
(b) Smart phone  
(c) Web based VOIP  
(d) Caller ID spoofing  
(e) Audio Codec.
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